



**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

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Order Instituting Rulemaking to Create a
Consistent Regulatory Framework for the
Guidance, Planning, and Evaluation of
Integrated Distributed Energy Resources.

Rulemaking 14-10-003
(Filed October 2, 2014)

**REPLY COMMENTS OF THE NATIONAL FUEL CELL RESEARCH
CENTER ON THE AMENDED SCOPING MEMO AND RULING OF
ASSIGNED COMMISSIONER AND ADMINISTRATIVE LAW JUDGE**

September 22, 2016

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I. Introduction

The National Fuel Cell Research Center (“NFCRC”) appreciates the opportunity to submit the following comments in reply to the comments filed on September 15, 2016 on the *Amended Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge* filed on September 1, 2016.

The NFCRC facilitates and accelerates the development and deployment of fuel cell systems; promotes strategic alliances to address the market challenges associated with the installation and integration of fuel cell systems; and educates and develops resources for distributed generation and combined heat and power (CHP) stakeholders around the world. The NFCRC was established at the University of California Irvine by the U.S. Department of Energy (DOE) and the California Energy Commission (CEC) with the goal of both developing

and transitioning to a form of power generation that is both energy efficient and environmentally sensitive. The NFCRC is working with GE-Fuel Cells, LLC; LG Fuel Cell Systems Inc.; Bloom Energy; Doosan Fuel Cell America; and FuelCell Energy.

Fuel cells in California are a fuel flexible replacement for combustion technology, providing primary power generation as well as backup power and hydrogen generation, that when operating on any fuel type (biogas, hydrogen, or natural gas) reduces both GHGs and criteria air pollutants compared to grid power. Stationary fuel cells are installed as primary power generation in California at hospitals, critical telecommunication hubs, grocery stores, hotels, prisons, water resource recovery facilities, food processing plants, universities, office buildings, and server farms. Some applications are all-electric, whereas other applications recover the heat for space heating, cooling, or steam. The use of heat for the production of chilled water is increasing in popularity as an alternative to electric driven vapor compression refrigeration. An example is the generation of 200 tons of chilling at the UCI Medical Center from a 1.4 MW stationary fuel cell. In addition to virtually zero emission of criteria pollutants, regardless of fuel source, fuel cell systems consume net-zero water in the production of energy.

Fuel cells can help mitigate an over-reliance on the long distance transmission of electricity from intermittent large-scale resources that are located far from load centers. In the event of a grid outage, fuel cell systems can seamlessly island, separate from the utility grid network and support key loads for customers who increasingly require an un-interrupted supply of electricity. Fuel cells have maintained firm heat and power for essential services and critical communication hubs and cell towers, data centers, emergency shelters and other essential services during blackouts in California and severe weather events across the Northeast including Hurricane Sandy.

On the utility side of the meter, large-scale fuel cell systems are being deployed to create grid support solutions where transmission is constrained or increased reliability is sought. Examples range from a 15 MW system in Connecticut, to a 30 MW system in Delaware, to a 59 MW system in Seoul, Korea. These resources are providing clean, 24/7, load-following power generation to complement the increasing deployment of intermittent solar and wind resources and support grid reliability in locations where it is most needed.

II. Reply Comments of the NFCRC

The NFCRC disagrees with the suggestion that fossil-fueled distributed generation resources are not eligible to participate in the pilot program described in the Commission's ruling.¹ As delineated in our comments and data provided on the Competitive Solicitation Framework Working Group Final Report, stationary fuel cell systems provide significant GHG reducing and grid stabilizing benefits for all Californians regardless of fuel source.²

The Distribution Resources Plan ("DRP") proceeding is progressing in conjunction with IDER. In the DRP's Assigned Commissioner's Ruling on Guidance for Public Utilities Code Section 769 filed on February 6, 2015, stationary fuel cells were clearly listed as an eligible resource. The Commission's rationale to include stationary fuel cells as an eligible resource was as follows:

Natural gas-fueled stationary Fuel Cells, CHP and stationary I-C engines have the potential to reduce GHG emissions, and so the utilities are encouraged to expand

¹ Sierra Club Opening Comments, page 6.

² NFCRC Reply Comments on the IDER Competitive Solicitation Framework Working Group Final Report, filed August 31, 2016.

*the scope of their DRPs to include any distributed generation that can produce GHG emissions reductions over its lifecycle.*³

It is the NFCRC's recommendation that the Commission maintain this guidance. Fuel cells are already an integral part of the California electric grid and emissions reduction plan. They must continue to remain eligible in any future distributed resource solicitation process and, therefore, in pilot programs meant to test the principles of such solicitations, including that discussed in the revised proposal before us.

III. Conclusion

The NFCRC appreciates the opportunity to offer these reply comments to the Commission.

Dated: September 22, 2016

Respectfully submitted,

/s/ Scott Samuelsen

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³ Assigned Commissioner's Ruling on Guidance for Public Utilities Code Section 769 – Distribution Resource Planning (R.14-08-013), February 6, 2015, attachment pg. 15.